

### **REMARKS**

The application has been fully reviewed in light of the Final Office Action dated February 23, 2005. Claims 1-17 are pending, with claims 1 and 15 being independent. Claims 18-20 have been cancelled without prejudice and/or disclaimer of subject matter.

#### *§103 Rejection*

Claim 1-20 stand rejected under 35 U.S.C. §103 as reciting subject matter that would have been obvious over U.S. patent no. 6,728,706 (Aggarwal et al.) in view of U.S. published patent application no. 2002/0194074 A1 (Jacobs). For the following reasons, Applicants respectfully traverse this rejection, and submit that the claimed invention is patentable over the prior art.

#### The Invention

Claim 1 is directed to a method of optimizing a value associated with a characteristic of a product stored in a first field of a security database of a self-checkout system at an optimizing time. The security database also includes a second field for storing identification information for the product, a third field for storing a last time when the value was last updated and a fourth field for storing at least one new value for the characteristic stored in the first field between the last time and said optimizing time. The value being used in a comparison to a second value associated with the characteristic and detected in a security area of the self-checkout system during a purchasing transaction. The comparison used as a security measure to confirm that a product placed in the security area during the purchasing transaction is the same product identified by the system after the system identifies the product via identification information input by a user of the system. The method also includes querying the database for products having a time difference between the optimizing time and the last time greater than a predetermined period and having at least one new value for the characteristic, with the query establishing a query result. The method also includes revising

the value for each product in the query result using the new value. Independent apparatus claim 15 recites the same patentable subject matter.

In some self-checkout systems, a physical characteristic (e.g., weight) is measured during purchase, and compared to a stored value of the characteristic in a security database. If the two differ, the item is rejected during the purchase, and either the shopper re-scans the product, where it then re-weighed and compared, or store personnel are summoned to override the rejection and let the product be purchased.

During the later process, when the store personnel overrides the rejection, the new measured value that was measured during the current purchase is stored in the security database for the particular product. The time at which this new measured value is stored is also stored in the database. At a later time (an optimizing time), the security database is updated - that is, the comparison values for products which have one or more new values stored for the comparison value (i.e., new values stored due to overrides - see above) is revised. Specifically, the database is queried for products where the comparison value of a product has an update value which has been stored earlier than the optimizing time (a predetermined time period prior to the optimizing time). The comparison value of each found product in the query is then revised using the new value.

This feature allows the security database to be updated so that incorrect values of a characteristic for a product are corrected, resulting in a faster and easier shopping experience for the shopper.

#### The Cited Prior Art

Aggarwal et al. is understood by Applicants to be directed to a method for searching online product catalogs. The method includes performing similarity searches on searches performed by a shopper, where a similarity metric is adjusted during the search to interactively improve the relevance of the resulting search results to the shopper. Relevance feedback and/or product redefinition is used to learn an “implied concept” of the shopper’s stated product requirement. In other words, the quality of the search results is enhanced

through understanding the concept implied by the shopper's queries by learning from the product results marked as "relevant" or "irrelevant" (see Abstract, Fig. 2).

Jacobs is understood to disclose a self-checkout method and apparatus, which allows for self-checkout of non-bar-coded items, using a graphical-user-interface (GUI)(See Fig. 30).

### Analysis

In order to establish a prima facie case of obviousness, three criteria must be met:

1. there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. there must be a reasonable expectation of success; and
3. the prior art references must teach or suggest all the claim limitation.

M.P.E.P. §2143.

Applicants again respectfully submit that the obviousness rejection as set forth in the outstanding Action, fails with respect to the third criteria for obviousness: neither Aggarwal et al. nor Jacobs, when taken alone or in combination, teach or suggest (or discloses) ***all the claim limitations*** of the claimed invention. Specifically, neither reference discloses, teaches or suggests, either alone or in combination at least the following features:

- a checkout system having a security area;
- a value associated with a characteristic of the product being used in a comparison to a second value associated with the characteristic and detected in a security area of a self-checkout system;

Expedited Procedure  
Under 37 C.F.R. §1.116  
Group Art Unit 2683

- querying a security database of a self-checkout system for products having a time difference between *an optimizing time* and *a last time* for a value of a characteristic associated with the product greater than a predetermined period; and/or
- revising the value for each product in the query result of the security database using the new value.

The Final Action also fails to disclose the details on the specific portion(s) of either reference, where each of the above noted features may be found. The Action only indicates that product attributes taught by Aggarwal et al. represent the characteristic of the products - i.e., the weight, size, etc. (alleged to be found on column 8, lines 39-45). Applicants respectfully submit, however, that even this noted passage does not disclose, teach or suggest any of the above-recited features. Moreover, Applicants submit that this passage merely mentions the disclosed system doesn't require that the shopper know the weight and other attributes of the product, not that it teaches the use of weight/characteristic as a security measure:

“More particularly, the inventive concept involves using similarity searches for querying product catalogs, and relevance feedback techniques and product specification modification to learn the shopper's requirements iteratively and interactivity **rather than expecting her, for example, to explicitly identify and weight product various attributes** which may or may not be of particular interest. The inventive concept also uses techniques from content-based image retrieval systems to enable product searches based on their visual properties. In particular, product specification modification provides a method of personalising products whereby the shopper may modify the approximate product attributes and visually inspect the changes before placing an order for the modified product, or using the modified product as a basis for further catalog searching.

Aggarwal et al., column 3, lines 39-53. .

Applicants also respectfully submit that it cannot be understood how the following passage from Aggarwal et al. discloses that the value is used in a comparison to a second

value associated with said characteristic and detected in a security area of a self-checkout system during a purchasing transaction”:

- (b) receiving from a user a request to search said database of records in the form of a query based on one or more of said fields;
- (c) providing to the user an initial set of similar search records found as a result of a similarity search based on said search request;
- (d) receiving from the user relevance feedback as to which of said similar search records are of greater and/or lesser relevance to the user compared with other similar search records;

Aggarwal et al., column 4, lines 3-13. This passage merely explains several steps in a process for providing a user an interactive product search facility for searching product information in an online catalog, using relevance feedback.

Furthermore, there is simply nothing in either reference, disclosing, teaching or suggesting querying a security database to optimize a value associated with a characteristic of a product in a self-checkout system. Aggarwal et al. again appears only to relate learning an “implied concept” of a shopper’s product requirements to improve a “similarity search” to display a list of products similar to products that the shopper has previously selected in an online catalog environment. In contrast, the embodiments of the present invention like those claimed in claim 1, improve the ability of a self-checkout system to optimize a characteristic value of a product in a security database so that adequate recognition of the product may occur when it is placed in a security area of a self-checkout system. The feature allows a self-shopping system to regularly (i.e., predetermined period) “self-adjust” (for example) a weight of a product used as a security parameter, should the weight of the product change due to a manufacturer changing, for example, a packaging material (e.g., glass to plastic).

Applicants also could find nothing in Aggarwal et al. to teach or suggest that the claimed query feature is based on products having a time difference between an optimizing time and a last time the value was updated, greater than a predetermined period, and/or where

such products have at least one new value. While it may be argued that the system of Aggarwal et al. may be capable of querying a database, there is no express or inherent disclosure specifically stating an optimizing time, a predetermined period or products having the at least one new value.

Even assuming that separately, the cited references disclose the noted claimed features (which Applicants steadfastly maintain neither reference does, either alone or combined), there is no teaching or suggestion to combine the references. The Action indicates that since the system taught by Jacobs would allow a customer to finalize a transaction by self-checkout (and saving time in the transaction) as well as searching for items, is motivation to combine it with Aggarwal et al. Applicants do not agree. Aggarwal et al. is a method and system for searching online product catalogs; Jacobs is directed towards a system for self-checkout of items *physically*. The two are unrelated and in fact, quite the opposite: one relates to searching/buying products remotely (Aggarwal et al.) using a computer network, where either the shopper receives the purchased product via courier or by visiting a pickup area, while the other relates to physically going to a retail location, physically picking out an item for purchase, and physically purchasing the item using a self-checkout system. Thus, Applicants are at a loss for determining how one of skill in the art would be motivated to combine the references.

Accordingly, in view of Applicants' above arguments, Applicants respectfully submit that the independent claims are patentable over Aggarwal et al. and Jacobs. Since the remaining prior art of record fails to disclose the deficiencies of these references, Applicants respectfully submit that the independent claims are patentable over the art of record as well.

With regard to the dependent claims, since they necessarily incorporate by reference all the features recited in their respective base independent claims, they are also believed patentable for the same reasons. Accordingly, withdrawal of the prior art rejections for all the pending claims is now respectfully requested.

Expedited Procedure  
Under 37 C.F.R. §1.116  
Group Art Unit 2683

### CONCLUSION

In view of the foregoing amendments and remarks, Applicants submit that the issues raised in the Final Office Action of February 23, 2005, have all been addressed, and that the present application is condition for allowance. Accordingly, Applicants respectfully request favorable reconsideration and early passage to issue of the present application. Applicants also submit that the present Response is an earnest attempt to further prosecution on the merits and resolve the issues from the outstanding Final Office Action. Accordingly, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

It is believed that no additional fees are due with respect to the number of claims or extensions of time. In the event that it is determined that any additional fees are due in such respects, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 50-0311 (ref. no. 27799-013), Customer No. 35437.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 692-6803. All correspondence should continue to be directed to our address given below.

Respectfully submitted,



Brian P. Hopkins, Reg. No. 42,669  
Attorney for Applicants

Date: May 23, 2005

Mintz Levin Cohn Ferris Glovsky & Popeo PC  
The Chrysler Center  
666 Third Avenue, 24<sup>TH</sup> Floor  
New York, New York 10017  
Tel. No.: (212) 935-3000  
Fax No.: (212) 983-3115